

# Halitherium

***Halitherium*** is an extinct dugongid sea cow that arose in the late Eocene, then became extinct during the early Oligocene. Its fossils are common in European shales. Inside its flippers were finger bones that did not stick out. *Halitherium* also had the residues of back legs, which did not show externally. However, it did have a basic femur, joined to a reduced pelvis. *Halitherium* also had elongated ribs, presumably to increase lung capacity to provide fine control of buoyancy. A 2014 review presented the opinion that the genus is dubious.

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## Classification

*Halitherium* is the type genus of the subfamily Halitheriinae, which includes the well-known genera *Eosiren* and *Eotheroides* and lived from the Eocene to the Oligocene.<sup>[1]</sup>

## Taxonomy



Restoration of *H. schinzii*

The genus *Halitherium* has had a confusing nomenclatural history.<sup>[2]</sup> It was originally coined by Johann Jakob Kaup on the basis of a premolar

from the early Oligocene (Rupelian) of southern Germany, but Kaup himself mistakenly stated that the premolar, in his opinion, *gehört zu Hippopotamus dubius* Cuv., unaware that *H. dubius* is actually a

junior synonym of the primitive sirenian *Protosiren minima*, while simultaneously coining the genus and species name *Pugmeodon schinzii* for the same specimen.<sup>[3]</sup> For his part, the renowned German paleontologist Christian Erich Hermann von Meyer included the type specimen of *Halitherium schinzii* in his composite species *Halianassa studeri*,<sup>[4]</sup> whose hypodigm also included the type specimens of *Metaxytherium medium* and *Protosiren minima* as well as a Miocene-age maxilla and a skeleton from the molasse basin in

### Halitherium

Temporal range:

**Late Eocene–Early Oligocene**

PreЄ	Є	O	S	D	C	P	T	J	K	PgN
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*Halitherium schinzi* skeleton, Muséum national d'Histoire naturelle, Paris

### Scientific classification

Kingdom:	Animalia
Phylum:	Chordata
Class:	Mammalia
Order:	Sirenia
Family:	Dugongidae
Subfamily:	†"Halitheriinae"
Genus:	<i><b>Halitherium</b></i> Kaup, 1838

### Species

- *Halitherium alleni* Simpson, 1932
- *Halitherium schinzii* (Kaup, 1838) (type)

Switzerland.<sup>[5][6]</sup> Later, Kaup synonymized *Pugmeodon* with *Halitherium* creating the new combination *Halitherium schinzii*, and the name *Halitherium* became universally accepted for the early Oligocene halitheriine material from Europe.<sup>[7]</sup> Because *Halitherium* was originally based on a misidentified type species and due to the widespread use of *Halitherium*, the sirenian specialist Daryl Domning petitioned the ICZN to designate *Pugmeodon schinzii* as the type species of *Halitherium*, and the proposal was approved by the Commission in 1989, effectively making *Pugmeodon* a junior objective synonym of *Halitherium* in line with the current concept of *Halitherium* introduced by Kaup himself.<sup>[8][9]</sup>

Voss (2013, 2014) dismisses *Halitherium* as a *nomen dubium* by virtue of being based on non-diagnostic remains. Voss based the opinion on the type species, *H. schinzii*, being *nomen dubium*, with its holotype fossil, an isolated molar, having no diagnostic value.<sup>[10]</sup> and a 2017 study found specimens traditionally assigned to *Halitherium schinzii* to be two separate species, one of which takes the name *Halitherium bronni* Krauss, 1858. Because *Halitherium* is dubious, *H. bronni* has been re-assigned to *Kaupitherium*.<sup>[10][11]</sup> The species *Halitherium alleni* Simpson, 1932, described by Simpson (1932) from skull caps in Oligocene deposits in Puerto Rico,<sup>[12]</sup> is basal to the two *Kaupitherium* species.<sup>[13]</sup>

## Formerly assigned species

- *Halitherium antillense* Matthew, 1916; *nomen dubium*<sup>[14][13]</sup>
- *Halitherium christolii* Fitzinger, 1842 = *Lentiarenium*<sup>[15][16]</sup>
- *Halitherium bellunense* de Zigno, 1875 = *Italosiren*<sup>[17][18]</sup>
- *Halitherium taulannense* Sange, 2001; distinct, unnamed genus<sup>[19][13]</sup>
- *Halitherium olseni* Rinehart, 1976 = *Crenatosiren*

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## Related species

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- *Metaxytherium*
- *Rytiodus*

## See also

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- Evolution of sirenians
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